

You will need an EarthComm book turned to pg. U-70.

IWBAT understand the characteristics of high-gradient and low-gradient streams through shared reading, class discussion, and written responses to questions. I will use vocabulary such as gradient, discharge, headwaters, meander, and river.

Water Resources Unit

Activity I p. U-70

Think About It *L image could be earlier in the same river*
L rapid flow, R more like a pond
L water fall, R more level/flat
Slower, flatter safer for swimming

Digging Deeper

Stream - a flow of water in a natural channel
river - a flow of water in a relatively large natural channel
brook/creek - very small streams
gradient - slope of a stream
headwaters - the beginning of the river (far from the mouth)

IWBAT understand the characteristics of high-gradient and low-gradient streams through shared reading, class discussion, and written responses to questions.

Water Resources Unit

Digging Deeper

high velocity + shallow depth = very strong forces
on stream bottom, move very large rocks
down cutting - erosion of a valley by a stream
high gradient streams - not much farmland, steep slope
Stream discharge - the amount of water passing
a given point in one unit of time

IWBAT understand the characteristics of high-gradient and low-gradient streams through shared reading, class discussion, and written responses to questions.

Water Resources Unit

Activity II p. U-81

Think About It Water gets deeper and leaves the natural channel and then spreads out as wide as it can. It can destroy buildings and habitats and cause death. Animals may find a new place to live. The moisture may promote new growth.

Digging Deeper

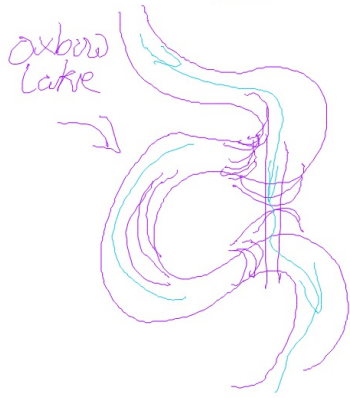
High gradient dig down - steep valleys
Low gradient dig down + sideways
Low gradients are usually found farther from the headwaters and may have floodplains
Meandering - curving back + forth
Outside of the curve has faster flows which erode the land

IWBAT understand the characteristics of high-gradient and low-gradient streams through shared reading, class discussion, and written responses to questions.

Water Resources Unit

Digging Deeper

Slower currents on the inside of the meanders
deposit eroded material
Meander scars mark where the meander bend
used to be



Water leaves the stream via evaporation,
diversion to water supply & crops
Water enters the stream via rain, snow,
groundwater
aquifer - permeable rock that transmits
water
flooding after heavy winter snow + warm
spring rain
Stream levels change w/ seasons

IWBAT understand the characteristics of high-gradient and low-gradient streams through shared reading, class discussion, and written responses to questions.

Water Resources Unit

In Schoology,

Respuesta Comprendiendo lo leído
Answer Check Your Understanding

- p. U-79 #1-5
- p. U-87 #2

in complete sentences.
con oraciones completas.

IWBAT understand the characteristics of high-gradient and low-gradient streams through shared reading, class discussion, and written responses to questions.

Activity 3 p. U-90

IWBAT understand the effect of stream velocity on sediment loads through shared reading, class discussion, and written responses to questions. I will use vocabulary such as turbulence, sediment, and velocity.

Water Resources Unit

Activity 3 p. U-90

Think About It what kind of sediments, how fast it runs, rocks from the area or upstream erode new materials, a new path, faster or slower flow rates

Digging Deeper
Sand and silt particles resist chemical dissolution but by abrasion they are made smaller
Suspended load - material traveling above the bed in the water
bed load - material that tumbles along the bed
eddies - swirls in a fluid or gas
turbulence - many eddies in a fluid or gas

IWBAT understand the effect of stream velocity on sediment loads through shared reading, class discussion, and written responses to questions. I will use vocabulary such as turbulence, sediment, and velocity.

Water Resources Unit

Digging Deeper

Bigger particles don't have to move but can be worn down by sand and silt which are moving. Collisions between pieces of gravel during floods can break them into smaller pieces.

IWBAT understand the effect of stream velocity on sediment loads through shared reading, class discussion, and written responses to questions. I will use vocabulary such as turbulence, sediment, and velocity.

Water Resources Unit

Respuesta Comprendiendo lo leído
Answer Check Your Understanding

- p. U-98 #2
in a complete sentence.
con una oracion completa.

Activity 4 p. U-100

IWBAT understand the parts of a river system and the effects of river systems on communities through shared reading, class discussion, and written responses to questions. I will use vocabulary such as tributary, drainage basin, and drainage divide.

Water Resources Unit

Activity 4 p. U-100

Think About It - Google a leaf image to describe

Transport water, inter connected, similar organic shapes
 Leaf - symmetrical - rivers not symmetrical all lead to one point
 Leaf - alive - rivers not source of survival
 Plant vs. not both feed things
 rivers part of bigger water cycle, leaves not

Digging Deeper

Tributary system has small streams that flow into bigger streams that flow into even larger streams
 Trunk stream - a major river fed by large tributaries
 Distributary system - streams that carry water & sediment away from the trunk stream

IWBAT understand the parts of a river system and the effects of river systems on communities through shared reading, class discussion, and written responses to questions. I will use vocabulary such as tributary, drainage basin, and drainage divide.

Water Resources Unit

Digging Deeper

Drainage Basin - the area in which all of the rain flows to the same final destination, usually an ocean
The Mississippi River is fed by tributaries like the Ohio river and flows to the Gulf of Mexico
It is the largest drainage basin in the USA.

Drainage divides - hilltops + mountains that separate drainage basins

We use river water for domestic and industrial purposes

Rivers are used for transportation, leisure activities

IWBAT understand the parts of a river system and the effects of river systems on communities through shared reading, class discussion, and written responses to questions. I will use vocabulary such as tributary, drainage basin, and drainage divide.

Water Resources Unit

Digging Deeper

Dams disturb the natural flow of the rivers and alter the ecosystem

Dams are used to generate power and control flooding

Rivers are used for fishing, boating, kayaking, tubing, rafting, swimming, bathing, religious ceremony, just to observe/look

IWBAT understand the parts of a river system and the effects of river systems on communities through shared reading, class discussion, and written responses to questions. I will use vocabulary such as tributary, drainage basin, and drainage divide.

Water Resources Unit

Digging Deeper

Respuesta Comprendiendo lo leído
Answer Check Your Understanding

- p. U-110 #1, 2, 3
in complete sentences.
con oraciones completas.

IWBAT understand the parts of a river system and the effects of river systems on communities through shared reading, class discussion, and written responses to questions. I will use vocabulary such as tributary, drainage basin, and drainage divide.

Water Resources Unit

09/11/17

Activity 5 p. U-113

IWBAT understand river systems as a part of the earth system through shared reading, class discussion, and written responses to questions. I will use vocabulary such as reservoir, flux, and outflow.

Seré capaz de comprender los sistemas fluviales como parte del sistema terrestre a través de la lectura compartida, la discusión en clase y respuestas escritas a las preguntas. Usaré vocabulario como reservorio, flujo y flujo de salida.

Water Resources Unit

Activity 5 p. U-113

Think About It

smooth rocks - weathering
Deposition - sediments from elsewhere
Transportation - cloudiness, depth for larger items

Digging Deeper p. 115

flux - the movement of matter or energy
between reservoirs
Reservoir - man-made storage for water
fluxes change with the amount of water
affects stream flow which affects weathering
transportation, + deposition which affects →

IWBAT understand river systems as a part of the earth system through shared reading, class discussion, and written responses to questions. I will use vocabulary such as reservoir, flux, and outflow.

Water Resources Unit

Digging Deeper

the geosphere, atmosphere, biosphere
Reservoirs have a maximum capacity that when
exceeded can cause floods
Types of reservoirs - atmosphere, groundwater,
lakes, biosphere, streams, surface run off
Inflow >> outflow, we can have floods
which can result in undercutting of
streambanks, increased transportation of
sediments, and damage to vegetation
in and out of the natural stream course
Changes can be subtle

IWBAT understand river systems as a part of the earth system through shared reading, class discussion, and written responses to questions. I will use vocabulary such as reservoir, flux, and outflow.

Water Resources Unit

Digging Deeper - p. U-116

Urbanization - the process of changing natural areas into developed areas for human use

- Limit groundwater influx
- most precip. becomes surface water
- flows in streams increase, may flood more
- diversion for ag. & other uses can reduce stream flows

Evidence of natural hazards (flooding) would prevent construction without big changes

Paving increases surface runoff

Contaminants flowing into streams

IWBAT understand river systems as a part of the earth system through shared reading, class discussion, and written responses to questions. I will use vocabulary such as reservoir, flux, and outflow.

Water Resources Unit

Answer Check Your Understanding

- p. U-117 #1, 3, 4
- in complete sentences.

What you should have completed as of today:

Lo que deberías haber completado a partir de hoy:

Respuesta Comprendiendo lo leído

Answer Check Your Understanding

- p. U-79 #1-5
- p. U-87 #2
- p. U-98 #2
- p. U-110 #1, 2, 3
- p. U-117 #1, 3, 4

in complete sentences.

con oraciones completas.

Turn these in for a grade (on paper or online).

Convierta estos para un grado (en papel o en línea).

Water Resources Unit

09/13/17

Unit 4: Chapter 3 (p. R-144)

Chapter Challenge

Visuals (Graph/chart/table/picture)

Answer the questions

↳ Evidence

↳ Justification

XC-Rebuttals

Quality of writing (Citations)

Position - for or against

IWBAT understand what is required of us during the preparation for and execution of the chapter challenge performance task. I will do this through shared reading and class discussion. I will use vocabulary such as residential, development, and supply.

Water Resources Unit

Unit 4: Chapter 3: Activity 1 (p. R-146)

I will generate a graphical model of the transport of water between reservoirs within the water cycle. I will use vocabulary such as precipitation, transpiration, and evaporation.

Generaré un modelo gráfico del transporte de agua entre embalses dentro del ciclo del agua. Usaré vocabulario como precipitación, transpiración y evaporación.

Water Resources Unit

Unit 4: Chapter 3: Activity 1 (p. R-146)

The activity is located in your Schoology for this class:

Earth Science S1: 03622-1, 03622-2 ▶ Unit 1 Water Resources / Unidad 1 los Recursos Hídricos ▶ Week 3 / Semana 3
 **Ch 3 Activity 1 The Water Cycle/ Capítulo 3 Actividad 1 El Ciclo del Agua**

La actividad está ubicada en su Schoology para esta clase:

Earth Science S1: 03622-1, 03622-2 ▶ Unit 1 Water Resources / Unidad 1 los Recursos Hídricos ▶ Week 3 / Semana 3
 **Ch 3 Activity 1 The Water Cycle/ Capítulo 3 Actividad 1 El Ciclo del Agua**

Skip Part B.
Omitir parte B.

I will generate a graphical model of the transport of water between reservoirs within the water cycle. I will use vocabulary such as precipitation, transpiration, and evaporation.

Water Resources Unit

Unit 4: Chapter 3: Activity 1 Digging Deeper

Respuesta en oraciones completas:

Answer in complete sentences:

Comprendiendo lo leído

Check Your Understanding

- p. R-154 #1, 3

Liquid
Solid
Vapor

I will generate a graphical model of the transport of water between reservoirs within the water cycle. I will use vocabulary such as precipitation, transpiration, and evaporation.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

(p. R-156)

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Seré capaz de discutir las fuentes de agua doméstica a través de la lectura compartida, discusión en clase y respuestas escritas a las preguntas. Utilizaré vocabulario como acuífero, acueducto y permeabilidad.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Think About It (p. R-156)

Clean water from rivers, lakes, precipitation, ocean, reservoirs, ground water

Groundwater, because surface water dries up in a drought

Investigate - Part C (R-161)

1a) Reservoir system (Chatfield, Dillon, etc.)
Rain/snow draining into streams (South Platte, Fraser)

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Investigate - Part C (R-161)

1b) Look At Average Water Consumption to determine whether a project can be supported

1c) They Denver Water Supply Used stages to prepare us by using water restrictions to limit water usage
Savage
meat
Thana ♡
*BABY

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Investigate - Part C (R-161)

1d)

1e)

1f)

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Digging Deeper - p. R162

Cities must have enough water in case of drought and for increased water use

Two main water sources are surface water and groundwater

Ways to increase water supply

- Take more water from rivers & lakes
- Conserve water
- Take groundwater
- Store water behind dams
- Convert saltwater to fresh water
- Bring water from afar via aqueducts

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Digging Deeper

Dams disturb the natural ecosystem & flow of the river

Sediment build up reduces the inflow/storage

Artificial reservoirs are where most surface water comes from

Porosity is the % of holes/open space a material has which tells you how permeable the mat'l is to water (how easily it passes through)

An aquifer is a rock or sediment with high permeability

To retrieve water from an aquifer, people drill wells

The unsaturated zone (where pores are filled with air)

Can extend tens of meters below the surface

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Digging Deeper

The saturated zone is where the pores are filled with water. The top of the saturated zone is called the water table.

The water table can be located at the surface in places such as rivers, lakes, and wetlands.

Groundwater speeds of 1 m/day are high; speeds are usually around 1 m/year. Smaller pores = slower flow

Groundwater moves from relatively high to low

An unconfined aquifer has an open area at the surface

Recharge is when water enters an aquifer

An aquiclude is rock that transmits water too slowly to supply a well

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Digging Deeper

p. 166 Aqueducts - large surface channels and pipes that transport water

usually they flow downhill with gravity, but may raise water over hills and mountains (w/ pumps)

Desalination - converting sea water to fresh water

Conservation - saving by not using as much

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

Water Resources Unit

Unit 4: Chapter 3: Activity 2

Respuesta en oraciones completas:

Answer in complete sentences:

Comprendiendo lo leído

Check Your Understanding

○ p. R-166 #1-4

Entiendo y aplicando lo aprendido

Understanding & Applying What You Have Learned

○ pp. R-167-8 #1, 2, & 5

IWBAT discuss the sources of domestic water through shared reading, class discussion, and written responses to questions. I will use vocabulary such as aquifer, aqueduct, and permeability.

P. R166 CYU

1 Describe six possible ways to increase the supply of water to a community.

2 What are the advantages of building a dam to provide a source of surface water? What are the disadvantages?

3 Explain how porosity and permeability of earth materials are important when considering ground water as a source of water.

4 Why is desalination of ocean water not a practical source of water supply?

p. R168 Understanding & Applying

5 Suppose your community's water supplier proposed building a dam on a nearby river to increase water supply. Make a list of the pros and cons of damming a river in your community.

Water Resources Unit

Unit 4: Chapter 3: Activity 3

p. R-169

IWBAT explain the difference between consumptive and nonconsumptive use. I will do this through shared reading, class discussion, and written responses to questions. I will use vocabulary such as conservation and domestic.

Seré capaz de explicar la diferencia entre el uso consuntivo y no consumo. Lo haré a través de la lectura compartida, discusión en clase y respuestas escritas a las preguntas. Voy a utilizar el vocabulario, como la conservación y doméstica.

Water Resources Unit

Unit 4: Chapter 3: Activity 3

Think About It p. R-169

Brush teeth - 1QT, 3L, 1C^w, 2.5C
Measuring cup under faucet while you brush your teeth

Investigate - Part B **Denver only / solo Denver**

Skip 5a and answer 5b and 5c for Denver only. Be prepared to share out. / Omitir 5a y la respuesta 5b y 5c para Denver solamente. Está preparado para compartir.

IWBAT explain the difference between consumptive and nonconsumptive use. I will do this through shared reading, class discussion, and written responses to questions. I will use vocabulary such as conservation and domestic.

Water Resources Unit

Unit 4: Chapter 3: Activity 3

Digging Deeper - p. R173

Irrigation is the single largest use of fresh water in the USA, 134 billion gallons each day. Irrigation + thermoelectric generation account for 78% of fresh water use.

Nonconsumptive use - liquid water is returned as liquid water.

Consumptive use - liquid water becomes water vapor and returns to the atmosphere.

Xeriscaping - planting landscaping to use as little water as possible.

IWBAT explain the difference between consumptive and nonconsumptive use. I will do this through shared reading, class discussion, and written responses to questions. I will use vocabulary such as conservation and domestic.

Water Resources Unit

Unit 4: Chapter 3: Activity 3

Digging Deeper

Mulch and drip irrigation conserve water by minimizing evaporation.

IWBAT explain the difference between consumptive and nonconsumptive use. I will do this through shared reading, class discussion, and written responses to questions. I will use vocabulary such as conservation and domestic.

Water Resources Unit

Unit 4: Chapter 3: Activity 3

Respuesta en oraciones completas:

Answer in complete sentences:

Comprendiendo lo leído

Check Your Understanding

○ p. R-175 #1-3

Entiendo y aplicando lo aprendido

Understanding & Applying What You Have Learned

○ p. R-176 #1 & 3

IWBAT explain the difference between consumptive and nonconsumptive use. I will do this through shared reading, class discussion, and written responses to questions. I will use vocabulary such as conservation and domestic.

Water Resources Unit

Unit 4: Chapter 3: Activity 4

p. R-177

IWBAT construct a water budget of my community from data, explain the influence of local climate on the water budget, and identify the times of year when the supply and demand of water are highest and lowest. I will do this via group discussion and constructing a graphical model using vocabulary such as budget, supply, and demand.

Seré capaz de construir un presupuesto de agua de mi comunidad a partir de datos, explicar la influencia del clima local en el presupuesto de agua e identificar las épocas del año en que la oferta y la demanda de agua son más altas y más bajas. modelo utilizando vocabulario como presupuesto, oferta y demanda.

Water Resources Unit

Unit 4: Chapter 3: Activity 4

Think About It

p. R-177

More money summer or winter depending on cost of living or employment
Or salary for consistent income
You make a budget so you don't run out of money
Look for another source of income
- Cut down on things we don't need
- buy when things are less expensive
- put it in an account to use later

Investigate - R178

30 min

Done in partners/small groups

Part A: Online research & graph creation

Part B: Construct a flow chart using data from the book

IWBAT construct a water budget of my community from data, explain the influence of local climate on the water budget, and identify the times of year when the supply and demand of water are highest and lowest.

Water Resources Unit

Unit 4: Chapter 3: Activity 4

p. R-177

Part A:

Part B:

IWBAT construct a water budget of my community from data, explain the influence of local climate on the water budget, and identify the times of year when the supply and demand of water are highest and lowest.

Water Resources Unit

Unit 4: Chapter 3: Activity 4

Digging Deeper - R180

A water budget is an accounting of the sources & demand for water resources

Groundwater & precipitation can keep rivers from drying up

Groundwater levels also fluctuate

River discharge is the volume of water that passes a certain point at one time, it can vary in times of drought and flood

During a drought, groundwater supplies a greater percent of a river's flow

When rivers run high, river water feeds the groundwater

IWBAT construct a water budget of my community from data, explain the influence of local climate on the water budget, and identify the times of year when the supply and demand of water are highest and lowest.

Water Resources Unit

Unit 4: Chapter 3: Activity 4

Digging Deeper

People prefer the water table to stay the same

During a drought, the water table decreases, goes down (dry spells)

During rainy periods, the water table rises

-the rain must fall on the aquifer's recharge area

The amount of water entering the system is balanced with the amount leaving before wells are drilled into the system

Once a well is drilled into the system, the water table forms a cone of depression in the vicinity of the well

IWBAT construct a water budget of my community from data, explain the influence of local climate on the water budget, and identify the times of year when the supply and demand of water are highest and lowest.

Water Resources Unit

Unit 4: Chapter 3: Activity 4

Digging Deeper

Groundwater is not a renewable resource when people use the water faster than it is replaced (mined). If water is removed as fast as it is replaced (or slower removal), it can be treated as a renewable resource.

IWBAT construct a water budget of my community from data, explain the influence of local climate on the water budget, and identify the times of year when the supply and demand of water are highest and lowest.

Water Resources Unit

Unit 4: Chapter 3: Activity 4

Respuesta en oraciones completas:

Answer in complete sentences:

Comprendiendo lo leído

Check Your Understanding

○ p. R-182 #1-3

Entiendo y aplicando lo aprendido

Understanding & Applying What You Have Learned

○ p. R-183 #1 & 3

IWBAT construct a water budget of my community from data, explain the influence of local climate on the water budget, and identify the times of year when the supply and demand of water are highest and lowest.

Water Resources Unit

Unit 4: Chapter 3: Activity 5

IWBAT identify and describe ways that human activity affects surface water and ground water. I will do this through group discussion, watching relevant videos, filling out a concept map, and write a short essay using vocabulary such as pollution, resources, and predict.

Seré capaz de identificar y describir las formas en que la actividad humana afecta a las aguas superficiales y subterráneas. Haré esto a través de la discusión en grupo, viendo videos relevantes, rellenando un mapa conceptual y escribiendo un ensayo corto usando vocabulario como contaminación, recursos y predicción.

Water Resources Unit

Unit 4: Chapter 3: Activity 5

Think About It - p. R184

Exposure to chemicals in the atmosphere
Spills, dumping, leaks, trash, animals, flooding,
dissolution
pipe leaks, dump into well, burrowing animals,
corpses, other storage leak, surface leeching,
dissolution, illegal dumping

Investigate - See your Schoology class

Water Resources Unit

Week 6

Activity 5 folder

Activity 5: Water Pollution

Investigar - Ver tu clase de Estudios

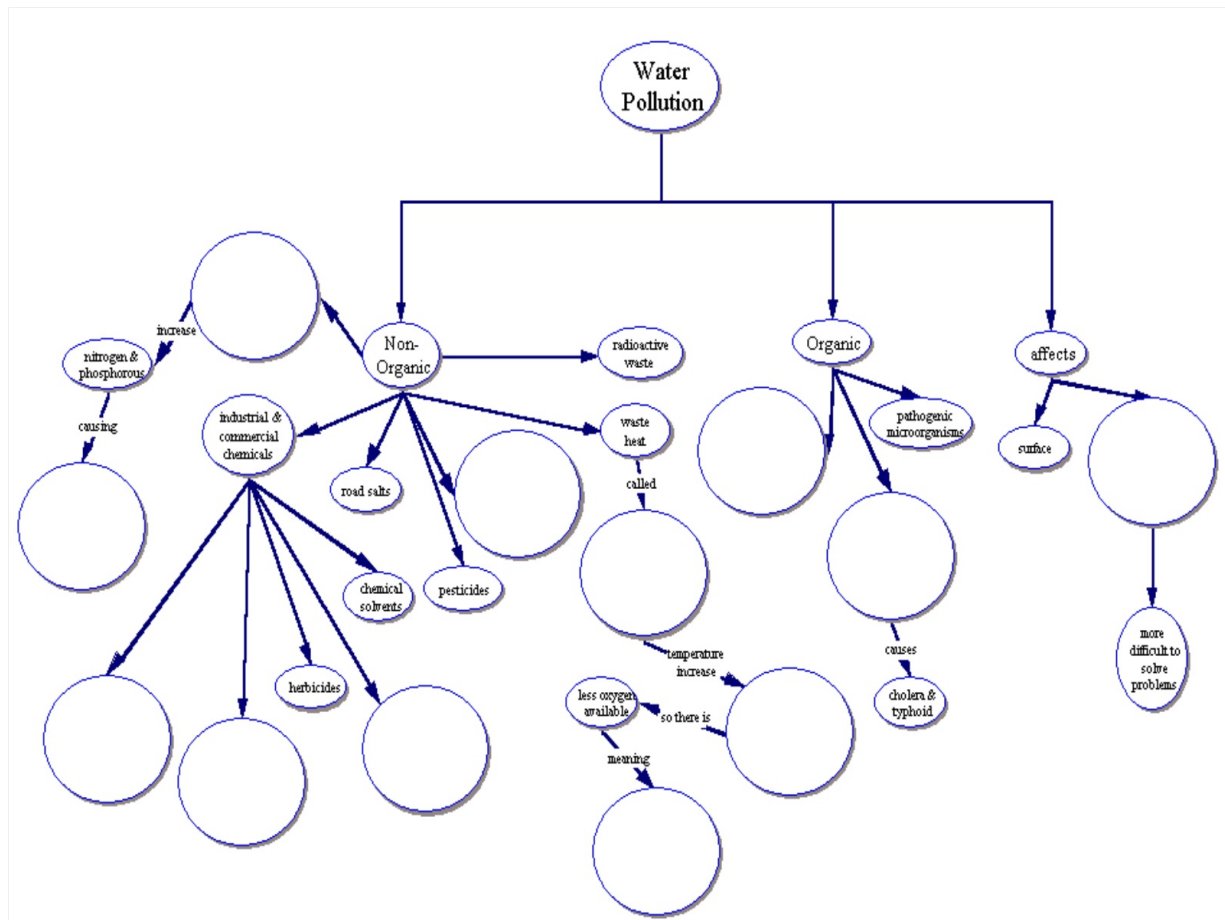
Unidad de Recursos Hídricos

Semana 6

Actividad 5 carpeta

Actividad 5: Contaminación del agua

IWBAT identify and describe ways that human activity affects surface water and ground water. I will do this through group discussion, watching relevant videos, filling out a concept map, and write a short essay using vocabulary such as pollution, resources, and predict.



Water Resources Unit

Unit 4: Chapter 3: Activity 5

Digging Deeper / Profundizando en el tema - R189

It is easier to clean surface water than groundwater.
 Surface water usually has more types of pollution.
 Coliform bacteria can signal sewage contamination of the water

E. coli Nitrates - NO_3

Nitrates reduce the amount of oxygen in red blood cells, can lead to suffocation & "blue baby" syndrome
 Major contamination source: agricultural fertilizers

Phosphates can contribute to algae blooms which cause anoxia

IWBAT identify and describe ways that human activity affects surface water and ground water. I will do this through group discussion, watching relevant videos, filling out a concept map, and write a short essay using vocabulary such as pollution, resources, and predict.

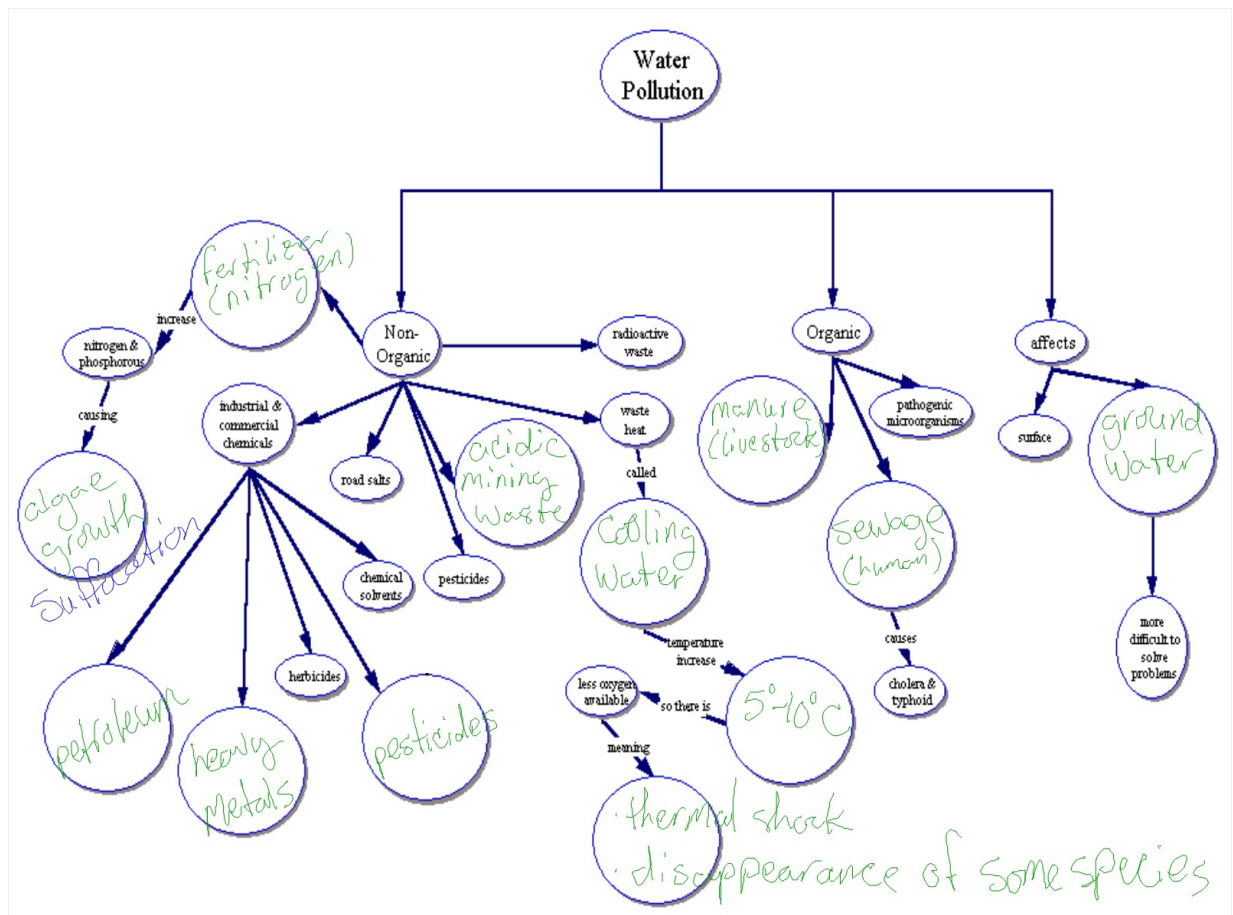
Water Resources Unit

Unit 4: Chapter 3: Activity 5

Digging Deeper / Profundizando en el tema - R189

Heavy metals - lead, mercury, cadmium, copper, zinc
Cooling water - 5°-10°C warmer, holds less oxygen
kills some species - thermal shock, suffocation
Replacement by new species

IWBAT identify and describe ways that human activity affects surface water and ground water. I will do this through group discussion, watching relevant videos, filling out a concept map, and write a short essay using vocabulary such as pollution, resources, and predict.



Water Resources Unit

Unit 4: Chapter 3: Activity 5

Compose an essay explaining why water resources are important in Colorado. Summarize the water use in Colorado and predict what could happen in the future if we are not careful with our resources. Be prepared to share your answer with the class.

Redacte un ensayo explicando por qué los recursos hídricos son importantes en Colorado. Resumir el uso del agua en Colorado y predecir lo que podría suceder en el futuro si no tenemos cuidado con nuestros recursos. Esté preparado para compartir su respuesta con la clase.

IWBAT identify and describe ways that human activity affects surface water and ground water. I will do this through group discussion, watching relevant videos, filling out a concept map, and write a short essay using vocabulary such as pollution, resources, and predict.

Water Resources Unit

Unit 4: Chapter 3: Activity 6

I will research and describe the water treatment process used by my community and understand the stages of the filtration of water for public use. I will do this via online research, shared reading, and responding to questions using vocabulary such as purification, treatment, and pollution.

Voy a investigar y describir el proceso de tratamiento de agua utilizado por mi comunidad y comprender las etapas de la filtración de agua para uso público. Voy a hacer esto a través de la investigación en línea, la lectura compartida, y responder a las preguntas utilizando vocabulario como la purificación, el tratamiento y la contaminación.

Water Resources Unit

Unit 4: Chapter 3: Activity 6

Think About It / Piensalo - p. R196

How safe is the water to drink? Can I find liquid water or is it frozen? Bathing? How much water can I find? Do I have enough for coffee?

Animal droppings, diseases, trash, bacteria, corpses, chemicals, fire residue, nuclear waste
Take a LifeStraw, boil water, watch for dead animals, look at water color + condition (foamy, stinky, etc)

Investigate Part C - p. R198

The materials you need are in the Activity 6 folder inside the Week 7 folder.

Investigar la Parte C - p. R198

Los materiales que necesita se encuentran en la carpeta Actividad 6 dentro de la carpeta Semana 7.

I will research and describe the water treatment process used by my community and understand the stages of the filtration of water for public use. I will do this via online research, shared reading, and responding to questions using vocabulary such as purification, treatment, and pollution.

Water Resources Unit

Unit 4: Chapter 3: Activity 6

Digging Deeper / Profundizando en el tema - R199

Evaporation + Condensation separate the water from substances dissolved in it

Bacteria convert organic contaminants into simple + harmless compounds
↳ contains carbon, hydrogen, oxygen primarily

Sand + gravel filter out material that makes water cloudy

Pollutants are introduced to water no matter how careful we are

Parts of a municipal water treatment system:

Screening, flocculation, filtering, disinfecting

Screens remove large pieces of debris

Add alum and lime to help things settle in the slow moving sedimentation tanks

I will research and describe the water treatment process used by my community and understand the stages of the filtration of water for public use. I will do this via online research, shared reading, and responding to questions using vocabulary such as purification, treatment, and pollution.

Water Resources Unit

Unit 4: Chapter 3: Activity 6

Digging Deeper / Profundizando en el tema - R199

Water passes through sand, gravel, and activated carbon for filtration

If inorganic compounds cannot be adequately removed via filtration, ion exchange is used to remove them

Ion exchange is effective in treating hard water

Water is disinfected before entering the distribution system

Disinfectants kill microbes, but Chlorine can react with some biological contaminants to form byproducts which can cause cancer after long exposure

Ozone is a powerful disinfectant, but doesn't protect in the distribution system like Chlorine does.

I will research and describe the water treatment process used by my community and understand the stages of the filtration of water for public use. I will do this via online research, shared reading, and responding to questions using vocabulary such as purification, treatment, and pollution.

Water Resources Unit

Unit 4: Chapter 3: Activity 6

Digging Deeper / Profundizando en el tema - R199

Primary treatment: settling + possibly Chlorination

Secondary " : filtration + oxidation by microorganisms

Tertiary " : flocculation, disinfectant, removal of excess/undesirable compounds like iron + manganese

Water costs are about \$2/100 gallons

Water naturally dissolves minerals as it moves through soils

Water softeners replace Calcium + Magnesium ions with Sodium ions

Water hardness protects against lead in the water + reduces soap suds

Hardness reflects the concentration of dissolved solids
Ca + Mg are essential nutrients

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Water Resources Unit

Unit 4: Chapter 3: Activity 6

Digging Deeper / Profundizando en el tema - R199

Sodium from water softeners can affect people with high blood pressure

Respuesta en oraciones completas:

Answer in complete sentences:

Compruebe su comprensión

Check Your Understanding

○ p. R-201 #1 & 3

Comprender y aplicar lo que ha aprendido

Understanding & Applying What You Have Learned

○ p. R-202 #1 & 3

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Water Resources Unit

Due Monday, 10/23 noon

Debido lunes, 23/10 al mediodía

Day 1 Pro & Day 2 Con

IWBAT construct a three paragraph argumentative essay.

I will do this through researching online the arguments for and against using dams on rivers, take relevant notes, and collaboratively document my sources. I will adhere to correct grammar and usage, transitions, citations, and use vocabulary such as dam, river, reservoir, and environment.

Directions in Schoology / Direcciones en Schoology

Dia 1 Favorable & Day 2 en Contra

Seré capaz de construye un ensayo argumentativo de tres párrafos. Haré esto a través de la investigación en línea de los argumentos a favor y en contra de usar represas en los ríos, tomar notas relevantes y documentar en colaboración mis fuentes. Me adheriré a la gramática correcta y al uso, transiciones, citas y uso del vocabulario como presa, río, embalse y ambiente.

Water Resources Unit

Due Monday, 10/23 noon

Debido lunes, 23/10 al mediodia

Days 3 & 4 Construct My Essay

IWBAT construct a three paragraph argumentative essay. I will do this through researching online the arguments for and against using dams on rivers, take relevant notes, and collaboratively document my sources. I will adhere to correct grammar and usage, transitions, citations, and use vocabulary such as dam, river, reservoir, and environment.

Directions in Schoology / Direcciones en Schoology

Dias 3 & 4 Construye Mi Ensayo

Seré capaz de construye un ensayo argumentativo de tres párrafos. Haré esto a través de la investigación en línea de los argumentos a favor y en contra de usar represas en los ríos, tomar notas relevantes y documentar en colaboración mis fuentes. Me adheriré a la gramática correcta y al uso, transiciones, citas y uso del vocabulario como presa, río, embalse y ambiente.